

CLAIMS

1. Process for the reduction of alcohol content
5 of beverages which is performed in a circuit with the following stages:

- a. circulation of the beverage from a feed tank, pressurized at maximum 40 bar, tangentially to a NF membrane to obtain two streams:
 - 10 i. one of retentate that does not cross the membrane,
 - ii. one of permeate that crosses the membrane and is composed of water, ethanol and some salts;
- 15 b. recombination of the retentate in the feed tank with the beverage to be processed;
- c. distillation of the retentate, at atmospheric or reduced pressure, leading to a top stream rich in ethanol and a bottom stream of dealcoholized
20 permeate;
- d. recombination of the dealcoholized permeate in the feed tank with the retentate/beverage;
- e. total or partial compensation of the volume loss due to the removal of ethanol by the addition of
25 purified water.

2. Process in accordance with claim 1 wherein the membranes are adjusted to allow selective permeation of ionic species according to their charge.

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3. Process in accordance with claims 1 to 2 wherein the ionic species can be total or partial removed from the dealcoholized permeate (1.c).

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4. Process in accordance with claims 1 to 3 wherein the membranes are regenerated, with 90% minimum flux recovery, by tangential circulation of water at room temperature.

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5. Process in accordance with claims 1 to 3 wherein the membranes are regenerated, with 90% minimum flux recovery, by tangential circulation of water at a temperature of 50-60 °C.

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6. Process in accordance with claims 1 to 3 wherein the membranes are regenerated, with 90% minimum flux recovery, by tangential circulation aqueous solutions of weak bases, with controlled pH between 8 and 11, depending on cleaning time.

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7. Process in accordance with claim 6 wherein a pH between 8 and 9 for long cleaning is used.

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8. Process in accordance with the previous claims wherein the operation is carried out in continuous or batch mode.

9. Process in accordance with the previous

claims wherein the final product is obtained by the mixture of the original beverage with beverage treated by this process.

5 10. Process in accordance with the previous claims wherein the final product presents the same organoleptic characteristics as the original beverage, namely body, flavour, aromatic intensity and aromatic profile.

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11. Use of the process described in the previous claims for the reduction or removal of ethanol from beverages such as wine, beer, cider, mead and sake.